



SEQUENCE LISTING

#13

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ZHOU, Xianjin

<120> HMGI PROTEINS IN CANCER AND OBESITY

<130> 54615.8001.US02

<140> US 08/852,666
<141> 1997-05-07

<150> US 08/679,529
<151> 1996-07-12

<160> 54

<170> PatentIn version 3.1

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gene and produce chimeric transcripts

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gene and produce chimeric transcripts

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1 5 10

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Pro Arg Gly Arg Pro Arg Lys Trp Pro Gly Leu Gln Lys
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<210> 6
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<223> Rearrangements of 12q15 in human lipomas which disrupt the HMGI-C gene and produce chimeric transcripts

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Gln Cys Asn Val Cys Ser Lys Pro Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Lys Ala Tyr His Pro His Cys Phe Thr Cys Val Met Cys His
20 25 30

Arg Ser Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Ile
35 40 45

His Cys Ile Glu Asp Phe
50

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1 5 10 15

Xaa Xaa Asn Ser Tyr His Pro Gln Cys Phe Thr Cys Val Met Cys His
20 25 30

Thr Pro Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gln Pro
35 40 45

His Cys Val Asp Asp Tyr
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<223> 11 unspecified amino acids between the two sequences

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Asp Cys Ser Gly Cys Gly Arg Gln Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Lys Arg Trp His Ala Ser Cys Leu Lys Cys Tyr Ala Cys

20 25 30

Arg Gln Pro Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asn
35 40 45

Ile Tyr Cys Lys Asn Asp Tyr
50 55

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<223> 11 unspecified amino acids between the two sequences

<400> 10

Leu Cys Ala Gly Cys Gly Gly Lys Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Lys Gln Trp His Met Arg Cys Leu Lys Cys Cys Glu Cys
20 25 30

Lys Leu Asn Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser
35 40 45

Ile Tyr Cys Lys Glu Asp Tyr
50 55

<210> 11
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<223> A novel sequence fused to the DNA binding domains of HMGI-C which
encodes transcriptional regulatory domains: Lin-11

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<223> 9 unspecified amino acids between the two sequences

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Glu Cys Ala Ala Cys Ala Gln Pro Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Lys Cys Trp His Gln Ser Cys Leu Arg Cys Cys Asp Cys
20 25 30

Arg Ala Pro Met Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Ile Leu
35 40 45

Cys Lys Thr Asp Phe
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<220>
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<223> 12 unspecified amino acids between the two sequences

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Gly Cys Ala Gly Cys Asn Arg Lys Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Lys Tyr Trp His Glu Asp Cys Leu Lys Cys Ala Cys Cys
20 25 30

Asp Cys Arg Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Leu Ile Leu Cys Arg Arg Asp Tyr
50 55

<210> 13
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<220>
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1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Arg Phe His Val His Cys Tyr
20 25 30

Arg Cys Glu Asp Cys Gly Gly Leu Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa His Ile Leu Cys Lys Thr Cys Asn
50 55 60

<210> 14
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<220>
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encodes transcriptional regulatory domains: zyxin

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<223> 14 unspecified amino acids between the two sequences

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Arg Cys Ser Val Cys Ser Glu Pro Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys Asn Phe His Met Lys Cys
20 25 30

Tyr Lys Cys Glu Asp Cys Gly Arg Pro Leu Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa His Val Leu Cys Met Lys Cys His
50 55 60

<210> 15
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<220>
<223> A novel sequence fused to the DNA binding domains of HMGI-C which
encodes transcriptional regulatory domains: apterous

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<400> 15

Arg Cys Ser Arg Cys Leu Ala Ser Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Leu Val Phe His Val Asn Cys Phe Cys Cys Thr Val
20 25 30

Cys His Pro Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu
35 40 45

Ile Tyr Cys Arg Thr His Tyr
50 55

<210> 16

<211> 56

<212> PRT

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<220>

<223> A novel sequence fused to the DNA binding domains of HMGI-C which encodes transcriptional regulatory domains: Lh2

<220>

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<222> (10)..(20)

<223> 11 unspecified amino acids between the two sequences

<220>

<221> MISC_FEATURE

<222> (38)..(48)

<223> 11 unspecified amino acids between the two sequences

<400> 16

Arg Cys Ala Arg Cys His Leu Gly Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Leu Val Tyr His Asn Leu Cys Phe Thr Cys Cys Thr
20 25 30

Thr Cys Asn Met Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Leu Val Tyr Cys Arg Leu His Phe
50 55

<210> 17

<211> 57

<212> PRT

<213> Artificial Sequence

<220>

<223> A novel sequence fused to the DNA binding domains of HMGI-C which encodes transcriptional regulatory domains: Lin-11

<220>

<221> MISC_FEATURE

<222> (10)..(20)

<223> 11 unspecified amino acids between the two sequences

<220>

<221> MISC_FEATURE

<222> (38)..(49)

<223> 12 unspecified amino acids between the two sequences

<400> 17

Arg Cys Ala Gly Cys Asp Gly Lys Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Lys Val Phe His Ile Arg Cys Phe Gln Cys Ser Val
20 25 30

Cys Gln Arg Leu Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Xaa Arg Phe Val Cys Gln Ser Asp Phe
50 55

<210> 18

<211> 56

<212> PRT

<213> Artificial Sequence

<220>

<223> A novel sequence fused to the DNA binding domains of HMGI-C which encodes transcriptional regulatory domains: RBTN-1

<220>

<221> MISC_FEATURE

<222> (10)..(20)

<223> 11 unspecified amino acids between the two sequences

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<221> MISC_FEATURE

<222> (38)..(49)

<223> 12 unspecified amino acids between the two sequences

<400> 18

Asn Cys Ala Ala Cys Ser Lys Leu Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Asn Val Tyr His Leu Asp Cys Phe Ala Cys Gln Leu
20 25 30

Cys Asn Gln Arg Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Xaa Ile Leu Cys Gln Met Asp Tyr
50 55

<210> 19
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<220>
<223> consensus residues

<220>
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<222> (2)..(3)
<223> 2 unspecified amino acids between consensus residues

<400> 19

Cys Xaa Xaa Cys
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<210> 20
<211> 10
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<213> Artificial Sequence

<220>
<223> consensus sequence of novel sequence fused to the DNA binding
domains of HMGI-C

<220>
<221> MISC_FEATURE
<222> (2)..(9)
<223> The letter "X", or protein "Xaa", indicates any amino acid between
the consensus residues (which in this case are histidine and
cysteine)

<400> 20

His Xaa Xaa Cys Xaa Xaa Cys Xaa Xaa Cys
1 5 10

<210> 21
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> consensus residues

<220>
<221> MISC_FEATURE
<222> (2)..(3)
<223> 2 unspecified amino acids between consensus residues

<400> 21

Cys Xaa Xaa His
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<210> 22
<211> 45
<212> PRT
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<220>
<223> Potential transactivation acidic domain encoded by the sequence
derived from chromosome 15 in ST90-375

<400> 22

Glu Glu Glu Glu His Leu Asn Thr Glu Arg Ser Ser Ala Gly Gly Gly
1 5 10 15

Trp Arg Gly Val Gln Pro Leu Gly Ser Pro Thr Pro Gly Glu Asp His
20 25 30

Arg Pro Ile Pro Ser Pro Ala Ser Gly Phe Pro Ser Ile
35 40 45

<210> 23
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Sense primer used to screen for obese mutation

<400> 23
cattctgagt ttgtccaaga tgc

23

<210> 24
<211> 20
<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense primer used to screen for obese mutation

<400> 24

ggtctgaggc agggagcagc

20

<210> 25

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Specific oligonucleotide primer synthesized and used to screen a human total genomic YAC library by the PCT-based method

<400> 25

aggggacaac aaatgcccac agg

23

<210> 26

<211> 25

<212> DNA

<213> Artificial sequence

<220>

<223> Specific oligonucleotide primer synthesized and used to screen a human total genomic YAC library by the PCT-based method

<400> 26

cgtcaccagg gacagtttca cttgg

25

<210> 27

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Anchored oligo-dT primer used to synthesize first strand cDNA

<400> 27

gcaatacgac tcactatagt tttttttttt tt

32

<210> 28

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> HMGI-C exon 1 sense primer used in first round of 3' RACE

<400> 28

cttcagccca gggacaacc

19

<210> 29
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> antisense adapter primer used in first round of 3' RACE

<400> 29
gcaatacgac tcactatag 19

<210> 30
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> a nested HMGI-C sense primer spanning exon 1 and 2 used to reamplify one ml of the PCR reaction

<400> 30
ggaagcagca gcaagaacc 19

<210> 31
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> primer 375 for performing reverse transcription for the detection of chimeric transcripts using novel sequence-specific primers

<400> 31
cttctttctc tgccgcatcg 20

<210> 32
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> primer 724 for performing reverse transcription for the detection of chimeric transcripts using novel sequence-specific primers

<400> 32
gtgaggatga taggccttcc 20

<210> 33
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Primer for the novel sequence derived from the chimeric transcript
obtained from lipoma ST90-375

<400> 33
cagaagcaga ccagcaaacc 20

<210> 34
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for the novel sequence derived from the chimeric transcript
obtained from lipoma ST90-375

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cttctttctc tgccgcatcg 20

<210> 35
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for the novel sequence derived from the chimeric transcript
obtained from lipoma ST93-724

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ctctggagca gtgcaatgtg 20

<210> 36
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for the novel sequence derived from the chimeric transcript
obtained from lipoma ST93-724

<400> 36
gtgaggatga taggccttcc 20

<210> 37
<211> 23
<212> DNA
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<220>
<223> first strand cDNA synthesis with primer 1

<400> 37
atgaattcct aatcctcctc tgc 23

<210> 38
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR amplification with primers 1 and 2

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23

<210> 39
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<220>
<223> 21-mer oligonucleotide complementary to the human HMGI-C mRNA
transcript beginning with the translation initiation codon

<400> 39
gccctcacgc cgtgcgctca t

21

<210> 40
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> 20-mer oligonucleotide complementary to the human HMGI-C mRNA
transcript beginning with the translation initiation codon

<400> 40
ccctcacgc gtgcgctcat

20

<210> 41
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> 19-mer oligonucleotide complementary to the human HMGI-C mRNA
transcript beginning with the translation initiation codon

<400> 41
cctcacgcg tgcgctcat

19

<210> 42
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> 18-mer oligonucleotide complementary to the human HMGI-C mRNA

transcript beginning with the translation initiation codon

<400> 42
ctcaccgcgt gcgctcat 18

<210> 43
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> 17-mer oligonucleotide complementary to the human HMGI-C mRNA
transcript beginning with the translation initiation codon

<400> 43
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<210> 44
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> 16-mer oligonucleotide complementary to the human HMGI-C mRNA
transcript beginning with the translation initiation codon

<400> 44
caccgcgtgc gctcat 16

<210> 45
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> 15-mer oligonucleotide complementary to the human HMGI-C mRNA
transcript beginning with the translation initiation codon

<400> 45
accgcgtgcg ctcac 15

<210> 46
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> 21-mer oligonucleotide complementary to the human HMGI(Y) mRNA
transcript beginning with the translation initiation codon

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<210> 47
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> 20-mer oligonucleotide complementary to the human HMGI(Y) mRNA
transcript beginning with the translation initiation codon

<400> 47
ttcgagctcg actcactcat 20

<210> 48
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> 19-mer oligonucleotide complementary to the human HMGI(Y) mRNA
transcript beginning with the translation initiation codon

<400> 48
tcgagctcga ctcactcat 19

<210> 49
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> 17-mer oligonucleotide complementary to the human HMGI(Y) mRNA
transcript beginning with the translation initiation codon

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cgagctcgac tcatcat 17

<210> 50
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> 17-mer oligonucleotide complementary to the human HMGI(Y) mRNA
transcript beginning with the translation initiation codon

<400> 50
gagctcgact cactcat 17

<210> 51
<211> 16
<212> DNA
<213> Artificial Sequence

<220>

<223> 16-mer oligonucleotide complementary to the human HMGI(Y) mRNA
transcript beginning with the translation initiation codon

<400> 51
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<210> 52
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> 15-mer oligonucleotide complementary to the human HMGI(Y) mRNA
transcript beginning with the translation initiation codon

<400> 52
gctcgactca ctcac 15

<210> 53
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<220>
<223> consensus sequence for HMGI DNA-binding domains

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Thr Pro Lys Arg Pro Arg Gly Arg Pro Lys Lys
1 5 10

<210> 54
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> consensus sequence for HMGI DNA-binding domains

<400> 54
Pro Arg Gly Arg Pro Lys Gly Ser Lys Asn Lys
1 5 10